

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Aura Yanavi

Filing Date: Herewith

Attorney File No.: 14846-36

Entitled: METHODS AND SYSTEMS FOR PREDICTING
SOFTWARE DEFECTS IN AN UPCOMING SOFTWARE
RELEASE

Assistant Commissioner for Patents
Washington, D.C. 20231

PETITION TO MAKE SPECIAL UNDER 37 C.F.R. § 1.102

SIR:

It is requested that the above-captioned patent application, filed herewith, be granted Special status for accelerated examination. As set forth in MPEP § 708.02(VIII), such a petition requires: (1) that all claims be directed to a single invention; (2) a pre-examination search; (3) copies of the references identified in the search deemed most closely related to the claimed subject matter; (4) a detailed discussion pointing out with particularity how the claimed subject matter is patentable over the references; and (5) the fee set forth in 37 C.F.R. 1.17(h). As set forth in more detail below, Applicants have complied with each of these requirements and granting of this Petition is respectfully requested.

I. APPLICANT'S CLAIMED INVENTION

Applicants' claimed invention is directed to methods and systems for predicting software defects in an upcoming software release. The claimed subject matter provides a technique for evaluating the relative size of the upcoming software release with respect to a previous software release, and estimating the number of expected defects based on the relative size of the upcoming software release and the number of observed software defects for the previous software release. In various embodiments, a metric is provided to measure the quality achieved after product implementation.

The current application comprises three independent claims. Independent claim 1 is directed to a method for predicting the number of software defects for an upcoming software release. Independent claim 11 is directed to a system for predicting the number of software defects for an upcoming software release. Independent claim 21 is directed to a computer-readable medium for storing instructions for carrying out the method steps of claim 1.

Should the Examiner determine that the claims are not directed to a single invention, Applicants will make an election without traverse according to established telephone-restriction practice. MPEP 708.02(VIII).

II. PRE-EXAMINATION SEARCH

A pre-examination search was performed by the professional search firm of Woolcott LLC (“Woolcott”) to locate the U.S. Patents and U.S. Patent Publications relevant to the inventive concept (the “Search”). Woolcott is located at 2001 Jefferson Davis Highway, Suite 411, Arlington, Virginia 22202, Tel: 800.223.9697, and has a web page address of <http://www.woolcott.com/index.html>.

Copies of Woolcott’s Search Report and the identified references are attached. As can be seen from the Search Report, the following classes and subclasses were searched.

Class	Subclasses
715	511
716	101, 120, 124, 130, 135, 170
702	182
714	37, 38, 704

Woolcott pointed out three references deemed most closely related to the claimed subject matter:

- (1) U.S. Patent 6,073,107 (issued Jun. 6, 2000) to Minkiewicz et al. (hereinafter “Minkiewicz”);
- (2) U.S. Patent 6,477,471 (issued Nov. 5, 2002) to Hedstrom et al. (“Hedstrom”); and
- (3) U.S. Patent 6,546,506 (issued Apr. 8, 2003) to Lewis (collectively referred to herein as the “Relevant References”). Each of the Relevant References is discussed in detail below.

Nothing in this Petition should be construed as an admission that any reference identified in the Search or discussed herein is available as prior art to the above-captioned application.

III. DETAILED DISCUSSION OF PATENTABILITY

The claimed subject matter of the above-captioned patent application is patentable over the Relevant References. Applicants provide detailed discussion in this Section that points out with particularity how the claimed subject matter is patentable over the Relevant References.

A. U.S. PATENT 6,073,107 (ISSUED JUN. 6, 2000) TO MINKIEWICZ

The subject matter of the above-captioned patent application is patentable over Minkiewicz. Among other deficiencies, Minkiewicz does not disclose forecasting the number of software defects for an upcoming software release based on the relative size of the upcoming software release and the number of observed software defects for the previous software release.

Minkiewicz discloses parametric software forecasting systems and methods, which are especially adapted to estimate object-oriented development costs, which utilize a plurality of non-cost based input parameters. These include development complexity, organizational practices and productivity, specification level and size. Software size can be reflected by specification of object-related characteristics of the proposed system to form an object-oriented size metric. One useful metric is based on calculating predictive object points. Alternatively, other size metrics such as number of lines of code or number of function points can be used alone or in combination with object-oriented metrics. In response to the specified characteristics an object-oriented metric, indicative of the complexity of the proposed system, can be determined. The size metric, for example based on predictive object points, is in turn made available to an analysis engine for production of labor and cost estimates.

Since Minkiewicz does not teach or suggest Applicants' claimed invention, Applicants' invention as claimed is patentable over Wilson.

B. U.S. PATENT 6,477,471 (ISSUED NOV. 5, 2002) TO HEDSTROM

The subject matter of the above-captioned patent application is patentable over Hedstrom. Among other deficiencies, Hedstrom does not disclose forecasting the number of software defects for an upcoming software release based on the relative size of the upcoming software release and the number of observed software defects for the previous software release.

Hedstrom discloses a method and statistical apparatus for predicting defects in products. The method according to one embodiment includes the step of providing historical data of defects at different stages of development and a value representing a goal for escaping defects.

Also provided is the planned total number of opportunities for defects. The goal for number of escaping defects and planned number of opportunities for defects are backsolved to determine the total number of defects. The total defects are distributed as a function of the historical data to provide prediction of defects at the different stages of development.

Since Hedstrom does not teach or suggest Applicants' claimed invention, Applicants' invention as claimed is patentable over Hedstrom.

C. U.S. PATENT 6,546,506 (ISSUED APR. 8, 2003) TO LEWIS

The subject matter of the above-captioned patent application is patentable over Lewis. Among other deficiencies, Lewis does not disclose forecasting the number of software defects for an upcoming software release based on the relative size of the upcoming software release and the number of observed software defects for the previous software release.

Lewis discloses a system, method, and computer program product for estimating test phase duration. This technique comprises: obtaining productivity information for a software project to be tested, this productivity information comprising an average number of hours required for executing a test scenario, an average number of hours required for identifying and documenting a defect, and a productivity factor of test personnel; obtaining input values for the software project, these input values comprising a projected number of test scenarios, a projected number of defects, and a projected number of test personnel; computing a number of weekly hours available for work; and generating the software test plan using the obtained productivity information and the obtained input values. Generating the test plan further comprises: computing a duration of the testing of the software project when the duration is not known; and computing a risk factor for the testing when the duration is known.

Since Lewis does not teach or suggest Applicants' claimed invention, Applicants' invention as claimed is patentable over Lewis.

Accordingly, because the Relevant References fail to teach or suggest one or more feature recited in the claimed subject matter, these references, either alone or in combination, would not have anticipated or rendered obvious the claimed subject matter.

IV. CONCLUSION

In view of the foregoing, Applicants' have met all the requirements for accelerated examination set forth in 37 C.F.R. § 1.102 and as detailed in MPEP § 708.02(VIII). Accordingly, Applicants respectfully request this case be made special for expedited examination. Please charge the required fee set forth in 37 C.F.R. § 1.17(h), estimated to be \$ 130.00, to Deposit Account No. 501358.

Respectfully submitted,



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